

A NEW SPECIES AND A NEW RECORD SPECIES OF THE GENUS SINGAPORA MAHMOOD (HEMIPTERA, CICADELLIDAE, TYPHLOCYBINAЕ) FROM CHINA

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Abstract A new species *S. bannaensis* and a new record species *S. arifi* Ghauri 1985 are described and illustrated from Yunnan Province, China. A key to males of *Singapora* species is provided.

Key words Hemiptera, Cicadellidae, Typhlocybinae, *Singapora*, new species, China

Introduction

The leafhopper genus *Singapora* Mahmood 1967 belongs to Typhlocybinae tribe Erythroniini (type species *S. nigropunctata* Mahmood). It was reviewed by Ghauri (1985) and eleven species are known worldwide so far, including four species from China. A new species and a new record species are described and illustrated from China in this paper. All specimens examined are deposited in the collection of the Institute of Entomology, Guizhou University (IEGU), China.

Singapora Mahmood, 1967

Singapora Mahmood, 1967: 20; Dworakowska, 1970: 759;

Dworakowska et Sohj, 1978: 39; Chou et Ma, 1981: 196;

Dworakowska, 1983: 118; Ghauri, 1985: 5; Chiang et Knight, 1990: 240.

Erythronaiopsis Ranakrishnan et Menon, 1973: 37.

Type species *Singapora nigropunctata* Mahmood, 1967.

Body usually yellow, or white, or greenish yellow, or brown. Head narrower than pronotum. Crown anterior margin obtusely rounded, slightly produced medially, subparallel to posterior margin. Vertex with large median apical spot black or brownish black, which only in female in some species. Eyes black, ocelli present. Face not depressed in profile, 45° or more from horizontal, anteclypeus pale or dark, narrow or inflated slightly. Pronotum usually without conspicuous patterns, but sometimes central region and near hind margin dark. Forewing 1st apical cell largest with transverse base, 2nd and 3rd apical cells nearly equal in width, 2nd slightly longer than 3rd; 4th apical cell reaching wing apex.

Abdominal apodemes broad, not or exceeding 3rd sternite.

Male genitalia. Anal tube appendage present.

Pygofer without appendages with a few slender setae scattered on ventral surface of base. Subgenital plate gradually curved dorsad, apex rounded with several macrosetae at about middle of outer margin and with marginal subbasal group of macrosetae. Style with some furrows at apex, midlength of style broad with some gracile microsetae near preapical base. Connective Y-shaped, with short central base and well developed manubrium. Aedeagal shaft curved dorsad. Aedeagus preatrium with single well developed process, dorsal apodeme distinct.

Distribution: Singapore, North Korea, India (Karnataka, Madhya Pradesh, Haryana, Pilani, Assam), Thailand (Bangkok, Saraburi), USSR (Uzbek); China (Taiwan, Shaanxi, Yunnan, Nanjing, Beijing, Hangzhou, Guangzhou).

Key to males of *Singapora* of the species

- Pronotum with yellow brownish markings, scutellum without dark spots *S. cyclops* **Kusnezov**
Pronotum without yellow brownish markings, or if pronotum with markings, then scutellum also maculate 2
- Aedeagal shaft with pair of apical processes 3
Aedeagal shaft without apical processes 7
- Aedeagus with long preatrium process 4
Aedeagus without preatrium process *S. diversa* **Ghauri**
- Apical processes of aedeagus short, not extending to 1/2 length of shaft 5
Apical processes of aedeagus long, extending beyond 1/2 length of shaft 6
- Aedeagal shaft very long and slim, curved obviously C-shaped *S. fopingensis* **Chou et Ma**
Aedeagal shaft short, slightly curved, nearly straight *S. nigropunctata* **Mahmood**
- Apex of aedeagal preatrium process with furrows *S. arifi* **Ghauri**
Apex of aedeagal preatrium process without furrows *S. bannaensis* **sp. nov.**
- Both side of apex of aedeagal shaft serrated 8

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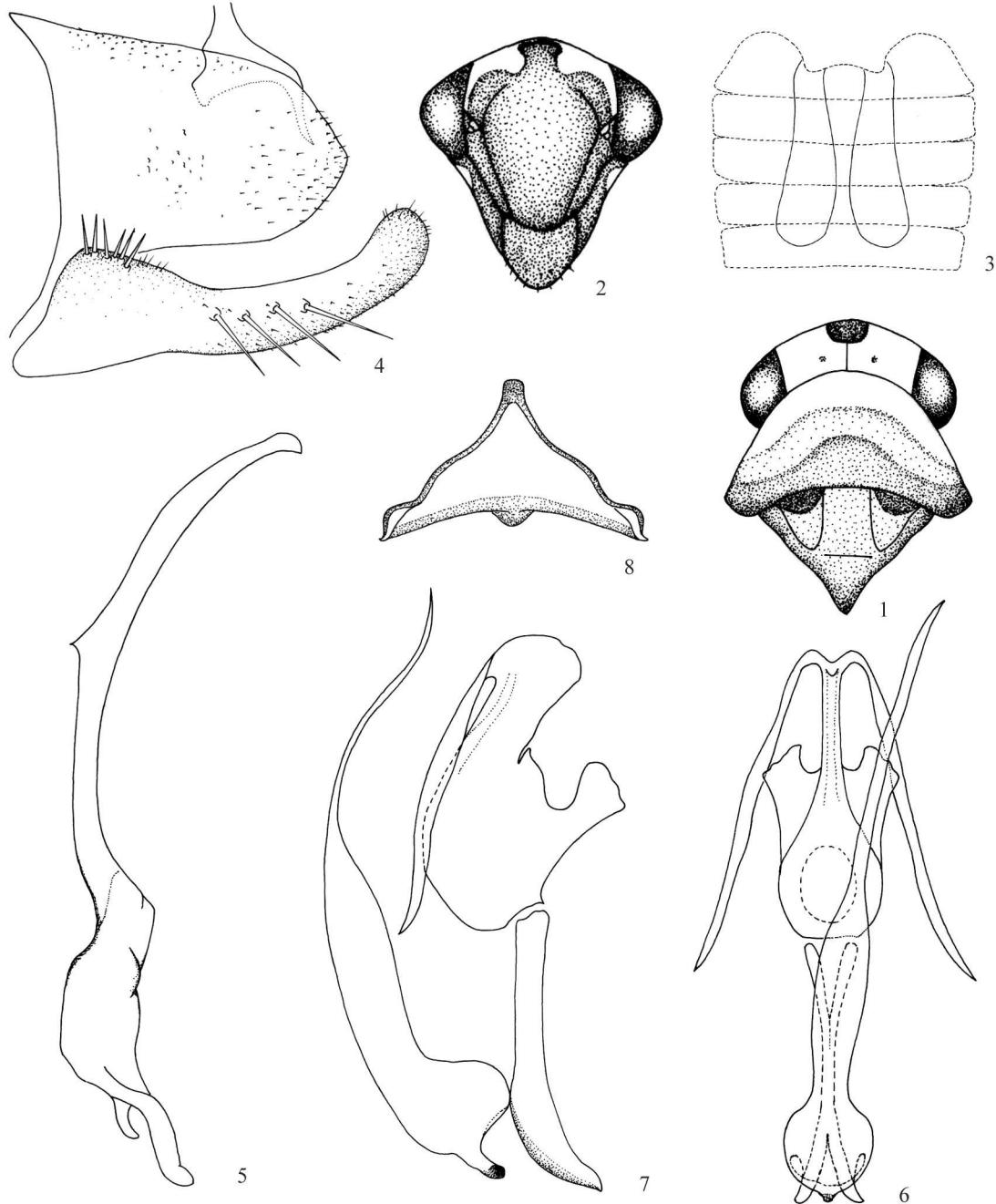
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Both side of apex of aedeagal shaft smooth 10
 8 Apex of aedeagal shaft truncated *S. shivae Dworakowska*
 Apex of aedeagal shaft arched slightly 9
 9 Apex of anal tube process expanded, truncated
 *S. indica Ramakrishnan et Menon*
 Apex of anal tube process not expanded, rounded
 *S. kamatakana Viraktamath et Dworakowska*
 10 Anal tube appendage long and fine, bent ventrally and tapering to apex *S. shinshana Matsumura*
 Anal tube appendage short and robust, rounded at apex 11
 11 Aedeagus preatrial process with base broad and narrowing abruptly near apex *S. victoreena Chiang et Knight*

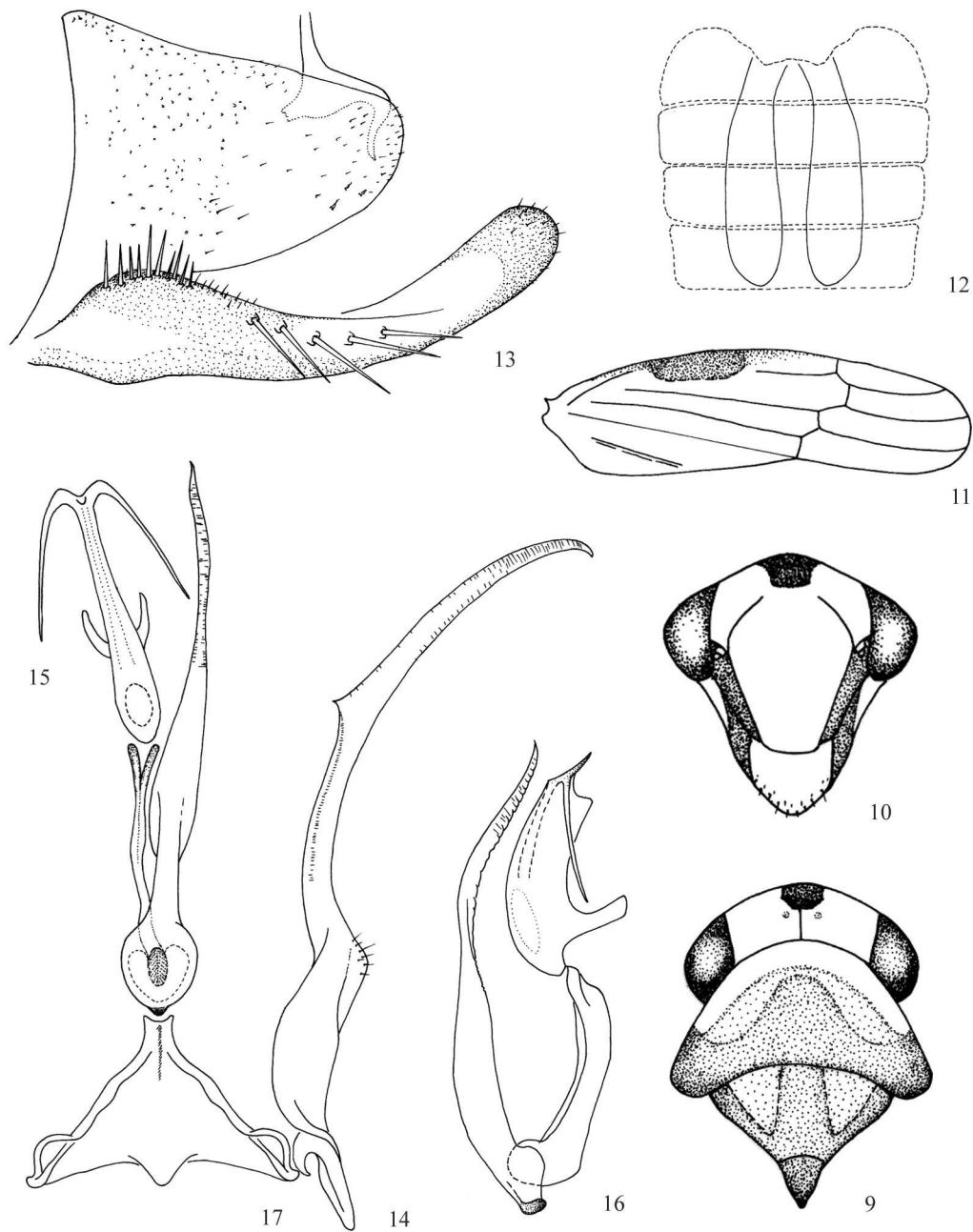
Aedeagus preatrial process tapering towards to apex
 *S. viridis Dworakowska*

Singapora bannaensis sp. nov. (Figs 1-8, 18)

Description Body length 54 mm. Vertex milky yellow, with a black median apical spot and with two small dim spots at sides of coronal suture. Eyes black (Figs 1, 18). Most part of face black, annectus broad, inflated, with a few small microsetae (Fig. 2). Pronotum (Figs 1, 18) arcuately rounded at anterior margin, concave at base; fore region whitish, middle



Figs 1-8 *Singapora bannaensis* sp. nov. 1 Head and thorax, dorsal view. 2 Face. 3 Abdominal apodemes. 4 Pygofer, lateral view. 5 Style. 6 Aedeagus, ventral view. 7 Aedeagus, lateral view. 8 Connective



Figs 9–17. *Singaporaa rifi* Ghauri, 1985 9. Head and thorax, dorsal view. 10. Face 11. Forewing 12. Abdominal apodemes 13. Pygofer, lateral view. 14. Style 15. Aedeagus, ventral view. 16. Aedeagus, lateral view. 17. Connective

and hind regions brownish. Scutellum transverse impression prominent, curved slightly. Forewing light brown, brownish some field dark brown.

Abdominal apodemes (Fig. 3) long, exceeding 7th sternite.

Male genitalia. Anal tube appendage tapering, its baso-ventral margin connected with dorsal apodeme of aedeagus. Pygofer lobe (Fig. 4) with numerous microsetae near caudal margin. Subgenital plate (Fig. 4) with six long macrosetae at basal angle, four large macrosetae on outer margin medially and numerous

microsetae at apex and outer surface. Style (Fig. 5) long and slim, with foot-like apex, preapical lobe poorly developed. Aedeagus (Figs 6–7) with a long preatrial process, about half apical length of preatrial process very thin; dorsal apodeme dilated distinctly. Aedeagal shaft broad, with pair of long apical processes and longer than length of aedeagal shaft, gonopore apical, ventrad. Connective (Fig. 8) almost triangular, two lateral arms long and strong, stem comparatively small and short.

Holotype ♂, China, Yunnan Province

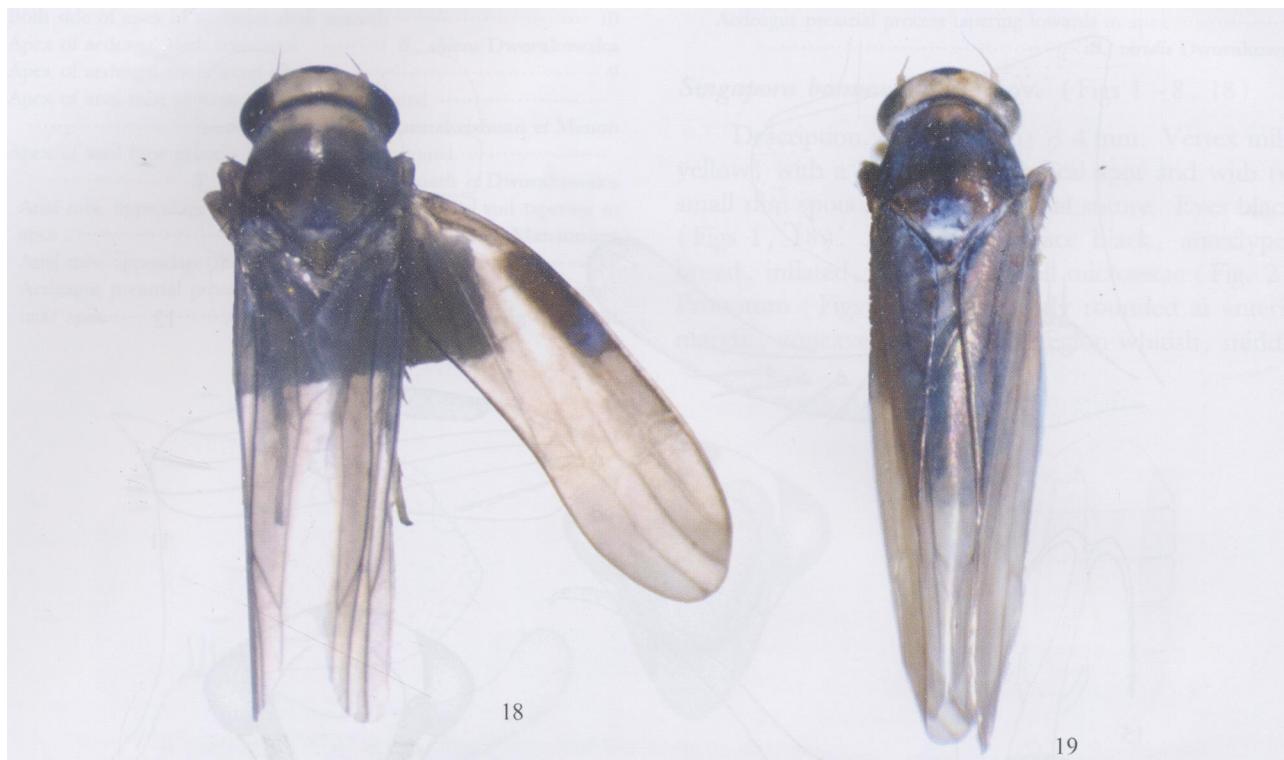


Fig 18 *Singaporina barnensis* sp. nov. (dorsal view). Fig 19 *Singaporina arifi* Ghauri 1985 (dorsal view).

Xishuangbanna (22° 06' N, 100° 55' E), 20 July 2008 coll LI Jian-Da Paratype 1 ♂, same data as holotype

Remarks The new species is similar to *S. arifi* Ghauri (1985) in male genital apparatus but can be distinguished from the latter by its very long hamate-like apical processes of aedeagal shaft extending beyond the base of aedeagal shaft, the aedeagus preatrial process very long expanded at base and quite slender near apex, and the face with most region entirely dark (Figs 6–7).

Etymology The new species is named after its type locality “Banna”.

Singaporina arifi Ghauri 1985 **New record** (Figs 9–17, 19)

Singaporina arifi Ghauri 1985 *Türk. Bit. Kor. Derg.* 9: 5, 11.

Description Body length ♂ 4.1–4.3 mm, ♀ 4.5 mm. Vertex (Figs 9, 19) dirty yellow or light brown with a large black apical spot medially, two small dark spots near apical spot not very distinct. Eyes black. Face (Fig. 10) frontoclypeus broad, pale and anteclypeus inflated nearly pentagon with numerous small microsetae just genae and bra black. Pronotum (Figs 9, 19) broad, only anterior margin pale, other areas dark blackish brown. Scutellum (Fig. 9) also dark with transverse impression curved slightly, arc-like nearer to apex than to base. Forewing (Fig. 11) brownish, brochosome field dark.

Abdominal apodemes (Fig. 12) long extending to hind margin of 6th sternite

Male genitalia Anal tube appendage well developed connecting with dorsal apodeme of aedeagus Pygofer lobe (Fig. 13) with few microsetae around distal margin and lots of microtrichia on lateral surface. Subgenital plate (Fig. 13) gently curved dorsad in lateral view, extending beyond caudal margin of pygofer with several macrosetae at base and five long macrosetae on outer-lateral surface. Style (Fig. 14) long and slender, its apex elongate, foot-like near apex with transverse striations. Aedeagus (Figs 15–16) well developed with a long preatrial process almost reaching beyond apex of shaft about half apical length of preatrial process with distinct striations and sculptures along both lateral margins. Dorsal apodeme slightly expanded in lateral view and bifurcate apically, preatrium slender. Connective (Fig. 17) about triangular, two lateral arms broad and strong stem robust with a longitudinal internal ridge.

Material examined 7 ♂♂, 1♀, China Yunnan Prov Yingjiang Tongbiguan (24° 41' N, 97° 56' E; alt 1 400–1 500 m), 20 July 2002 coll LI Zi-Zhong

Distribution India, China (Yunnan).

Host plant *Derris robusta*.

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新小叶蝉属一新种及一新纪录种记述 (半翅目, 叶蝉科, 小叶蝉亚科)

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摘要 记述采自中国云南省新小叶蝉属 1新种, 版纳新小叶蝉 *Singapora bannaensis* sp. nov 及 1中国新纪录种, 阿氏新小叶蝉 *Singapora arjii* Ghauri 1985. 新种区别于属内其它种的特征在于: 阳茎端部的刺突很长, 其末端已超过阳茎干基部水平; 阳茎前腔突基部膨胀, 近中部骤细; 腹内突长, 伸达

关键词 半翅目, 叶蝉科, 小叶蝉亚科, 新小叶蝉属, 新种, 中国.

中图分类号 Q969.35

第 7腹节。

词源: 新种名取自采集地地名“版纳”。

同时给出该属世界种类检索表, 模式标本保存在贵州大学昆虫研究所。

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